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EXAMINER

VAN PELT, BRADLEY J

ART UNIT	PAPER NUMBER
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3682

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/037,852
Filing Date: January 04, 2002
Appellant(s): FILIPIAK ET AL.

MAILED

AUG 10 2004

GROUP 3600

Karin H. Butchko
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed May 28, 2004.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

The rejection of claims 1, 2, 4-10, 12, and 23 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7). Specifically the limitations in claims 4-10 and 12 are not separately argued, since the applicant is relying on arguments based on independent claim 1.

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

5,973,248	CHEN	10-1999
5,383,738	HERBERMANN	1-1995

(10) *Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 2, and 22-25 are rejected under 35 U.S.C. 102(b). Claims 3-21, and 26-30 are rejected under 35 U.S.C. 103(a). This rejection is set forth in a prior Office Action, mailed on July 3, 2003.

(11) *Response to Argument*

A. The rejection of Claims 1, 2, and 23 under 35 U.S.C. 102(b) as being anticipated by Chen is proper.

Claim 1 of the instant invention sets forth “a pair of sockets and a pair of opposed inclined edges, and each of said pair of opposed inclined edges defines an opening for each of said pair of sockets.” The applicant argues that Chen does not anticipate the limitation of “opposed inclined edges.” The applicant has provided the dictionary definition of inclined as “to deviate from a line direction or course,” and edge as “a line or segment that is the intersection of two plane faces” (see Paper No. 8).

Chen discloses many opposed inclined edges. (1) Each of the socket halves 32, 32', 34, and 34' have two square-shaped opposing flanges. At the corners of each square, the sockets “deviate from a line direction or course,” thus, the sockets are inclined. Also the corners are an

“intersection of two plane faces,” and are thus edges. Each of the inclined edges is opposed by another edge either across or below itself.

The definition of inclined also sets forth “specifically: to deviate from the vertical or horizontal.” (2) Given this definition, at the intersection of all the flanges that contain through holes and all of the semi spherical portions a pair of opposed inclined edges are formed (see appendix A). (3) In Fig. 4, a pair of sockets 31, 31' comprise semi spherical recesses 331, 331', 341, 341', which have opposed inclined edges illustrated by double lines positioned within the semi spherical recesses (best shown on recess 331). Furthermore, a curved line has an infinite number of slopes ranging from zero to infinity thus the edges are deviating constantly from a vertical or strait line.

Chen discloses many variations of “opposed inclined edges.” The examples cited here is not intended to be exhaustive. For example (4) the chamfers on the ends of the sockets are “opposed inclined edges.” Therefore Chen discloses opposed inclined edges.

B. The rejection of Claim 24 under 35 U.S.C. 102(b) as anticipated by Chen is proper.

Claim 24 sets forth “each of said inclined edges are inclined relative to a lower edge and an upper edge of said socket component.” The examples 2-4 addressed above read on this limitation. The intersections of the flanges and the semi-spherical portions form inclined edges relative to a lower edge (horizontal faces of square-shaped flanges) and upper edge (vertical faces of square shaped flanges) of said socket component. Also the opposed inclined edges illustrated by the double lines inside the sockets and chamfers are inclined to the faces of the square shaped flanges. Therefore, Chen discloses inclines relative to the upper and lower edges of the sockets.

C. The rejection of Claim 25 under 35 U.S.C. 102(b) as anticipated by Chen is proper.

The claim sets forth "said arm has a range of motion of 90°." Chen discloses this limitation in Fig. 3. The supporting rods 40, 41' have a range of motion of 360° about an axis perpendicular to the upright support rod 29. Furthermore, the supporting rods will rotate at least 90° about an axis parallel to the upright support 29. Chen anticipates this limitation.

D. The rejection of Claim 22 under 35 U.S.C. 102(b) as anticipated by Hebermann is proper.

In the appeal brief the applicant argues "Herbermann does not disclose a method . . . providing a [socket] component having a pair of sockets." The claim does not define "a socket component," as consisting of *only* a pair of sockets. Therefore, the rejection is proper (see paragraph 3 of paper 7).

E. The rejection of Claim 3 under 35 U.S.C. 103(a) as being unpatentable over Chen is proper.

Claim 3 sets forth the size of the balls and arms. Size is generally within the level of ordinary skill in the art. The applicant argues that no evidence has been supplied. In paragraph 8 of the final rejection (Paper No. 7) the examiner indicated to the applicant a change in size is generally recognized as being within the level of ordinary skill in the art citing *In re Rose*, 105 USPQ 237 (CCPA 1955).

F. The rejection of Claim 3 under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Herbermann is proper.

The applicant does not argue the impropriety of the rejection specifically; rather, the applicant relies on limitations of independent claim 1. Therefore, the rejection is proper.

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G. The rejection of Claim 11 under 35 U.S.C. 102(b) as anticipated by Chen is proper.

Claim 11 sets forth "said pair of inclined edges are inclined approximately 75° from a lower edge of said assembly." As discussed above in Fig. 4, a pair of sockets 31, 31' comprise semi spherical recesses 331, 331', 341, 341' which have opposed inclined edges illustrated by double lines positioned within the semi spherical recesses (best shown on recess 331). A curved line has an infinite number of slopes ranging from zero to infinity relative to a lower edge of the square shaped flange, thus 75° is included in this range. Chen anticipates this limitation.

H. The rejection of Claim 26 under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Herbermann is proper.

Claim 26 recites that the gap between the clamp halves is adjustable. Chen anticipates this limitation. The applicant states "Chen only discloses that the socket halves 31 and 31' are secured together by bolts [sic] screw bolts 333 and does not disclose that the gap between the halves is adjustable." Since Chen discloses that the socket halves are secured together by screw bolts, Chen discloses the gap between the clamp halves is adjustable. As shown in Fig. 5, screw bolts 333 thread into wing nuts 334, 334'. By loosening or tightening the wing nuts 334, 334', the gap in between 33 and 34 will change.

If the gap was not adjustable, Chen's device would not work. The primary function of the device disclosed in Chen is for adjustment of supporting rods 40, 40'. If the gap could not be adjusted, the device would not function, because the gap between the clamp halves 33 and 34 would be so small that the supporting rods 40, 40' would be rigidly locked into one position or the gap would be so large that the supporting rods 40, 40' would be dangling loosely, thus

rendering the device inoperable. Thus, Chen discloses the gap between the clamp halves is adjustable.

I. The rejection of Claims 13, 15-19, 21, 27 and 28 under 35 U.S.C. 103(a) as being unpatentable over Herbermann in view of Chen is proper.

Without conceding the impropriety of the rejection, claims 13, 16, 17, 18, 20, 21, and 27-30 could have also been rejected under 35 U.S.C. 102(b) as being anticipated by Chen (see paragraph 2 of final rejection Paper No. 7).

Herbermann discloses all of the instantly claimed invention except a first and second clamp half secured together. As discussed in the final rejection Paper No. 7 on page 6, Chen shows a first and second clamp half secured together. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the robot arm of Herbermann with first and second halves secured together for the purpose of having a non-permanent structure thus increasing the maintenanceability of the robot arm.

There are many other forms of motivation to make this combination. The clamp 28 in Herbermann will not last as long as the clamp device disclosed in Chen, because the clamp has relatively very little material associated with it in order to be more flexible. Furthermore, as the user tightens the clamp 28 repeatedly the clamp will fatigue much faster than the clamp halves of Chen. Also Chen's device provides a much more robust design. The clamping force of Herbermann is dependant on the flexibility of the socket 30 as illustrated in Fig. 3, the clamp 28 surrounds the female socket 30 as the clamp 28 is tightened the female socket 30 grabs the male ball 32. The designer must use a more flexible or thinner gauged material to get a tighter clamping force. Flexible thinner material will not hold much weight. This design therefore suffers durability in view of the amount of clamping force desired. As opposed to Chen the

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designer can make the sockets very thick without suffering the amount clamping force desired.

There is sufficient motivation to make this combination, and the rejection is proper.

J. The rejection of Claim 14 under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Herbermann is proper.

See heading E.

K. The rejection of Claim 20 under 35 U.S.C. 103(a) as being unpatentable over Herbermann in view of Chen is proper.

Claim 20 requires the inclined edges to be inclined 75° from a lower edge. Claim 20 could have also been rejected under 35 U.S.C. 102(b) as being anticipated by Chen (see heading G). Herbermann discloses this limitation in Fig. 1. The inclined female socket 30 is inclined 75° from a lower edge of 24. At the very least the socket can be orientated 75° from the lower edge by adjusting the device.

L. The rejection of Claim 29 under 35 U.S.C. 103(a) as being unpatentable over Herbermann in view of Chen is proper.

Claim 20 set forth a range of motion of 90°. Both Herbermann and Chen disclose this limitation (see heading C). In Fig. 1, the links 26 of Herbermann can be rotated 360 also about an axis of rotation perpendicular to the page illustrating the drawings.

M. The rejection of Claim 30 under 35 U.S.C. 103(a) as being unpatentable over Herbermann in view of Chen is proper.

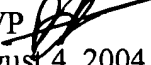
See heading H.

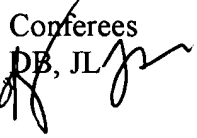
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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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BJVP 
August 4, 2004

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